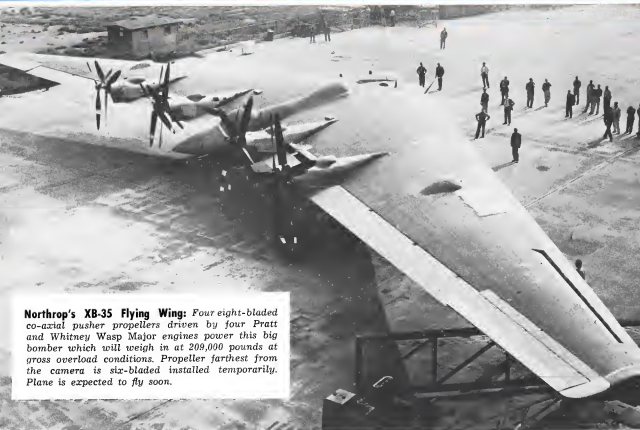


Aviation News

McGraw-Hill Publishing Company, Inc.

MAY 6, 1946



Northrop's XB-35 Flying Wing: Four eight-bladed co-axial pusher propellers driven by four Pratt and Whitney Wasp Major engines power this big bomber which will weigh in at 209,000 pounds at gross overload conditions. Propeller farthest from the camera is six-bladed installed temporarily. Plane is expected to fly soon.

Flying Wing May Promise New Transport Designs

Test flight of Northrop XB-35 nears as airlines study commercial possibilities. Page 7

French Aircraft Industry Unreceptive to Export Plans

Poorly financed, and over-staffed, manufacturers resist government's program. Page 10

Simplified Radio Requirements Nearing Final Phase

CAA system of designating pilot examiners likely to be followed by FCC. Page 13

Piper Super-Cruiser at \$2,905 Seen as Long-Desired

Greater performance, better styling and accommodations feature new, three-place plane. Page 14

Shortages of Materials Threatens Industry Shutdown

Lack of aluminum seriously retards deliveries by manufacturers of military planes. Page 19

Improvement of Airline Equity Positions Indicated

Substantial options to company officials noted, with Smith's most significant. Page 27

North Carolina Intrastate Line Gaining Popularity

Operation of DC-3 on non-reservation basis produces added revenues. Page 28

NWA Signs Cargo Agreement with Railway Express

Entrance of rail-owned company into air freight field studied by airlines for implications. Page 33

Every Major
UNITED STATES
AIRLINE
uses
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"MODFLOW"
CABIN TEMPERATURE
CONTROLS



MINNEAPOLIS
Honeywell
CONTROL SYSTEMS



CREATIVE ENGINEERING
makers of the famous A-1
Electronic Airplane used
on four-engine bombers

THE AVIATION NEWS

Washington Observer



FOREIGN OBSERVATION—Foreign air missions in this country are showing an extremely active interest in experimental non-military aircraft now under development. The French Air Ministry has followed all new aircraft developments closely, and the Russian Purchasing Commission is said to be watching all American aviation periodicals for new design announcements. Favorably the announcement of a new airplane or helicopter design is followed by letters of inquiry from foreign agencies to manufacturers.

• • •

DC-6 JET?—The Army soon may gain insight into a still very young version of a jet-propelled Douglas Aircraft DC-6. Present indications are that 1400 horsepower engines will be used and the plane identified as the XC-117. Army's DC-6 prototype conventionally powered is the XC-112. Jet ones, if made, will be significant in their indication of operating costs of a jet-powered commercial DC-6.

• • •

ARMY-NAVY RACE—Quiet development of transonic research aircraft, potentially capable of reaching supersonic speeds may become an Army-Navy race. Both services have projects under way and both are reported nearing completion. There are indications that Douglas may be first in the air with an ultra-speed plane. Douglas officials are saying nothing, but privately they have hopes of being able to beat Lockheed speed records.

AIR POWER STRESSED—Emphasis placed on air power by General Eisenhower in outlining the Army's program for the next 16 months was welcomed with interest in Washington for its effect on Congress. While aviation has many friends on Capitol Hill there are many there who do not understand the importance of the "toll, fire and open-minded" scientific research which the general urged. While he went into some detail in regard to air power his simple statement that "under current conditions and those of the predictable future the influence of air power cannot be overemphasized" should be enough to convince the economy-minded skeptics.

• • •

FLC AIRCRAFT DIVISION—Replacement for William Vogelback as director of the aircraft division of the foreign liquidation commission will be Col. Paul Bonser. He served as Army alternate on the Foreign Commission on surplus disposal and when released from the Army joined the Surplus Property Administration as a consultant on aviation surplus. He has been acting as consultant to Brig. Gen. James McElhiney, aviation director of the War Assets Administration. It is reported that Gen. McElhiney may leave War Assets and join civilian differences between him and General Gregory are deep-seated. Gen. McElhiney denies he plans to leave but changes in this agency have been frequent due to pressure from Capitol Hill.



New view of the Sikorsky S-53 helicopter, first of its capacity (four-place) to replace a conventional aircraft



Tire Tip from Alaska

"In our year-round operations throughout Alaska, we have found that Goodyear tires give exceptional performance on our Douglas DC-3's under all weather conditions." A. G. WOODLEY
President, Pacific Southern Airlines

Here is further confirmation of what veteran pilots and airline operators learn from long experience. Goodyear airplane tires give more

dependable service because they are built with an extra margin of safety—no flat provides super safety when the going gets rough—insure longer wear under all conditions. Best proof of that is the fact so many leading airlines and airplane manufacturers specify Goodyear—the world's first choice in airplane tires, tubes, wheels and brakes. For information, write: Goodyear Aviation Products Division, Akron 14, Ohio, or San Antonio 14, California.



It's a Goodyear Blimp World Pacific Southern Airlines uses this popular Goodyear because of its long wear in operations requiring relatively frequent landings.

Flying Wing May Hold Promise Of Revising Transport Designs

Test flight of Northrop XB-35 means as one airline completes survey of commercial possibilities and others ponder future of fuselage planes.

By SCHOLER BANGS

John K. Northrop's gamble on his beted in the "flying wing," and the Army's multi-million dollar gamble on Northrop, will be put to final test within three months.

By mid-August, at not sooner, the latest flying wing aircraft will be built, the Northrop Aircraft Company's XB-35 bomber, spanning 172 ft. and weighing 155,000 lbs. loaded, will be ready for its initial flight.

The "35," first of a series of 13 of identical design, ordered by the Army, has been moved out of its construction dock at Hawthorne, near Los Angeles, and during the next few weeks will undergo vibration tests, propeller adjustment, Army and company final inspection, and taxi tests.

Competition Coming Along—As the big wing begins test flights, competitors already will be testing competitors within the factory. A turbo-jet version will be the second to be delivered to the Army, and a subsequent model will be powered by propeller engines.

The prototype is powered by four Pratt & Whitney Wasp Major engines, driving four eight-bladed Hamilton Standard superchargers—the machine's rotating propellers having a disc diameter of 13 ft. 4 in.

Reverie pitch will be used to reduce landing runs.

Future at Stake—Upon this plane the Northrop company has staked its "big plane" future... and the possibility of wedging into the domain of the nation's commercial transport builders.

At least one major airline has made a complete engineering survey of the XB-35 in considering the company's proposal... although softened during the war years—claim that the wing offers marked advantages over conventional aircraft as a commercial transport.

William J. Corry, Northrop director of engineering, contends that in comparison with a conventional airplane of identical power, gross weight, and fuel load, a flying wing will carry one-fourth more useful load in the form of passengers, cargo or fuel, travel one-fourth farther with an identical fuel load; carry one-fourth more load a given distance with a given amount of fuel and, travel "substantially" faster with the same applied power.

Pre-flight data indicates that the lift-drag ratio of the flying wing will be between 144 and 204-to-1 in comparison with a ratio of 90 to 106-to-1 obtained by the most efficient

XB-35 Details

Here are several specifications of the Northrop XB-35.

Dimensions—Span, 172 ft. 6 in. chord, 37 ft. 10 in. Tip chord, 9 ft. 4 in. Max height, 39 ft. 1 in. Max. length (due to wingtip), 13 ft. 2 in. Propeller diameter, 9 ft. 6 in. Wing area, 6000 sq ft.

General—Crew, 15 men. Bomb load, controlled. Range, 12,000 miles. All-metal full cantilever construction. Design weight, empty, 10,000 lbs. Design weight, loaded, 14,000 lbs. Gross weight, 200,000 lbs.

Power Plant—Four Pratt & Whitney Wasp Major engines, one pair each of Series R-4000-17 and R-4000-21. Single-stage General Electric turbo superchargers.

Propellers—Four eight-bladed Hamilton Standard, supercharger-driven, constant-speed. Reversible pitch. Diameter, 13 ft. 4 in.

Landing Gear Group—The single-type "tail wheel" arrangement has diameter of 5 ft. 6 in. Single nose wheel of 4 ft. 2 in. diameter. Gear fully retractable.

Controls—Landing flap; elevators for elevator and aileron functions. Split flap drag reduction at high speed. Full-boost hydraulic operation of control surfaces. Pressurized loading of control system gives "feel" of control surface operation.

wing-and-fuselage bombers and

Ease of Construction—Complex as



Close Look of the Flying Wing! One of the chief attractions of the radical design is apparent in this front view.

the XB-35 appear to be internally as one leaving the big plane's engine compartments, bomb bays, and pressurized central cabin, Northrop engineers insist that the surplus is vastly easier to assemble, and less involved structurally, than a fuselage made of composite ribs.

■ **Army tests support Northrop's engineering enthusiasm.** It is quite likely that the XB-35 will find an early and extensive comparison on the part of this California company to permeate others to think in terms of *skins* for a much larger version of the wing, possibly in the neighborhood of 350,000 sq. ft. gross weight, and big enough to permit a fully-smooth wing surface of maximum efficiency.

■ **Revolution in Tokyo.**—Should the air transport industry react as Northrop hopes it will, there is a strong possibility that the flight of the "35" may attract a sudden re-audrey of transport aircraft designs now in drafting boards of manufacturers committed to the welded-jointing.

While a dozen small flying wing designs built by Northrop since the organization of his present company in 1939 have shown successfully incorporated innovations, the XB-35 will be watched closely by "satellite" observers of both airlines and competing manufacturers.

Control of the XB-35 will be maintained by three groups of flaps: **■ Centrally located** at the leading edge are landing flaps.

■ **Trailing the wing beyond the engine section** are Northrop-designed "eleven", functioning as elevator and ailerons.

■ **At the trailing edge of the outer wing section** are combinations of trim flaps and split flaps serving as drag brakes.

These controls are supplemented at low speed by outer wing leading edge slats, automatically closed at cruising and high speeds, to eliminate wing tip stall.

Attenuation of control surfaces is by a full-body hydraulic system, into which has been linked a pneumatic "loading" device.

■ **Wing Loading.**—"Lightly loaded for test flight the '35's" will share, in comparison with many military bomber designs, an extremely low gross wing loading. The wing surface of 4000 sq. ft. will show, at an empty weight of 58,000 lbs., a wing loading of 32 lbs./sq. ft., a wing loading loaded with the XB-35's four wing loading of only 49 lbs./sq. ft., and the figure runs to only 57 lbs./sq. ft. for a possible overload from weight of 208,000 lbs.



Even Comparison: Within the center section of the XB-35, is the cabin for the plane's crew—one regular, and six alternates.

History of Flying Wing Design

The industry with which John Northrop has pursued his flying wing design philosophy, despite discouraging outcome from many days associated in engineering circles, is indicated by the following historic sequence.

1903.—Develop first flying wing sketches, considering the entire aircraft as a "flying surface."

1904.—Built first approach to a "flying wing," mounting full-size ribs on twin lateral bracing struts, the wing, which carried a biplane engine.

1905.—The 1933 design was flown, reported, and successfully, by Eddie Behncke, now retired, to the president of Aerochase Corp.

1906.—Organized Northrop Aircraft Corp. after securing connections with Douglas Aircraft Company. While with Douglas he carried into preliminary design a flying wing, but the project was abandoned. Design drawn for 30-

ft. span, two-engine, N-3-04 flying wing.

1906.—N-3-04 successfully test flown by Vance Brown.

1907.—Develop flying wing bomber design submitted to Army.

1908.—Under Army contract fabrication of N-3-05 began.

1909.—Prototype N-3-M carried through series of experimental, allowed test wings to include N-3-M series. Four in number, each having a 30-ft. wing span. During this time the Northrop company designed and flew the N-3-05, a radial engine tailless fighter. After experimental runs the project was abandoned.

More significant were tests of a turbo-jet fighter, which showed promise of extreme speed but was lost at airport during test flight, killing Harry Crosby, test pilot. In the development of fighter wing design Northrop continued extensive flight research on pure jet propulsion of wing gliders.



Little Pioneer of Big XB-35: John K. Northrop began working with the flying wing design as early as 1903. A two-engine version, the N-3-M, shown here, was successfully flown by Vance Brown in 1906.

Boeing Announces Production of 417

The Boeing 417 transport has been ordered into mass production at Boeing's Wichita division. William M. Allen, Boeing president, announced the company's decision to enter into large scale production of smaller transport planes, a significant step in view of Boeing's reputation in the field of large aircraft—the B-17, B-29 and the 50-passenger Stratocruiser. (See Production Page 26.)

AVIATION CALENDAR

May 4th—Alfa Helms Aircraft Company, 175 Madison Ave., New York City, Ind. 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

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French Industry Unreceptive To Government's Export Plans

Poorly financed, and over-criticized with Federal officials, manufacturers resist program aimed at strengthening country's foreign exchange.

The French aircraft industry is reported this week as lukewarm without enthusiasm to the exhortations of the Air Ministry that it produce for export. With few competitive airplanes yet off the boards, without sufficient capital, and over-carrying the burden of what it considers an unnecessarily large number of government functionaries on the payroll, the industry's reaction is best described as one of passive melancholy.

While few government wants reports to build foreign orders, the industry has little to sell and feels that even if it had more, it could not offer its planes at attractive prices. It will be months before new designs are available, and while a number of lightplane types—namely the Nord 1300 and the Moite MH 50—are being produced, financial considerations are said to stand in the way of their production at a reasonable price.

Budget Dropouts Hopes—In an attempt to encourage large scale production that is now being reduced and prices the government had promised to buy the lightplane output for resale, assuring manufacturers thereby of funds upon

which to operate. The recent general slack of the French budget, however, killed this project. Meanwhile, the industry has been heavily mismanaged and is not free to seek private capital.

Another obstacle to lightplane production is the shortage of suitable power plants. New engines in the lower horsepower range are produced by Mathis, Pate and Beguer, but the only one actually on the market is the Langley, which is described as expensive and of old design. Nevertheless, as purchases of American or British engines for these planes is contemplated.

New Lightplanes—Latest addition to the list of French lightplanes now flying is the Nord 1300, a metal low-wing monoplane, designed with an eye toward mass-production. Carrying a pilot and two passengers, it is claimed to have a useful load of 192 lbs with a cruising range of 181 miles.

The 1301 has retractable tricycle landing gear and a 140 hp air-cooled Renault A Pr 1 engine. Cruising speed is said to be 145 mph and maximum speed 180 mph. Manufactured by SNCAN, it is the

second in series after the Nord 1181, a four-place monoplane powered by a 180 hp Renault engine and equipped with a variable pitch propeller.

Senate Ups CAA Deficiency Funds

The Senate last week tacked a \$284,945 allocation for operations of the Civil Aeronautics Administration between now and July on the second deficiency appropriation.

As passed by the House, the bill allocated \$1,048,380 for CAA, undercutting the Budget Bureau recommendation by \$184,940.

The Senate re-allocated funds for two CAA items:

(1) It boosted an allocation of \$29,006 allowed by the House for several administrative to \$44,000, so that CAA could move ahead with establishment of a glass and performance staff and an aviation production statistics section.

(2) It boosted CAA's allocation for acquisition and operation of air navigation facilities by \$174,940, from the \$149,000 approved by the House. This will permit CAA to operate 14 Army range facilities located at Alexandria and Baton Rouge, La.; Cleveland, N.Y.; Colorado Springs, Ariz.; Ft. Rucker, Ala.; Ladd, and Mullan, Tex.; Santa Barbara and Salinas, Calif.; Riverside, Walnut Ridge, and Texarkana, Ark.; and Western Sales, N.C.

In addition, the Senate approved a \$206,000 allocation to CAA's weather bureau for establishment of five meteorological observation stations in the Arctic region.

The deficiency bill is now pending before a joint conference committee which will decide on differences between House and Senate alterations for CAA general administration, maintenance and operation of air navigation facilities, and Arctic reporting services.

Mitchell Hearings to Open

A wide selection of industry leaders has been invited to testify at hearings on the Mitchell bill, establishing an Air Power Board to determine methods of sustaining air power during peacetime, which start on Wednesday. The hearings are being held before a subcommittee of Senate Interstate Commerce Committee, headed by Sen. Hugh Mitchell (D., Wash.), author of the measure, in room 318, Senate Office Building in Washington.

Lightplane Design Examined By AAF

Five manufacturers enter competition for security lesson aircraft.

Cassidaigne, Valler, Boeing, Piper, Bellanca, and Lusington Grumman have entered AAF design competition for a light plane to spot artillery fire, AAF practices expansion for the ground service.

The industry as a whole was invited to submit designs of a plane which could get in and out of small ground areas at slow speed, with minimum risk to the pilot. Design of the five manufacturers already are under consideration at Wright Field. It was indicated no additional entries were expected. Closing date was not immediately available.

Safety Features Included—Primarily safety or all of the designs incorporate safety features, such as two controls instead of three, limited travel of elevators to prevent stalls and spins, and new arrangements of doors, flaps, and wings. It is noted that one of the designs may be tricycle type, with its third wheel out on the tail. Lusington Grumman's design is reported to incorporate the most innovations.

AAF is considering the competition designs in the light of suggestions recently submitted by the Civil Aeronautics Administration and Aircraft Industries Association, so that the lightest common design in military and civilian light planes would result in lower cost to the Army and to private purchasers, and would provide a lower continuing loading of equipment to draw upon in case of a defense emergency.

The suggestions were worked out in a meeting of T. P. Wildt, CAA administrator, John H. P. Martin, executive director of AIA, and other interested parties.

Civilian Potential—CAA expects a report from AAF, after a decision on the design competition has been reached, indicating the extent to which common features can be used for military and civilian purposes. Officials interested in the joint effort and the Army was co-operative, and some satisfactory results were hoped for.

Senate Approves Report On Federal Airport Bill

The Lee-McCarran bill looking to a \$1,000,000,000 airport development program in the U.S. during the coming seven years last week

completed its last step in Congress when the Senate, by a 52 to 48 vote, adopted the conference version of the legislation.

The measure now needs only the President's signature before the Civil Aeronautics Administration can apply for a planning appropriation to get the program underway.

The measure provides:
A Federal expenditure of \$900,000,000 for airport construction in the continental U.S., generally to be matched by local sponsoring

agencies on a 50-50 basis.
A Federal expenditure of \$25,000,000 for airport development in Alaska, Hawaii, and Puerto Rico.
A \$1,000,000 allocation for airport planning by the CAA.

Senate acceptance of the conference bill followed a concerted effort on the part of "state's rights" to have the measure rejected in an attempt to force on the House the Senate position in favor of the furnishing of all Federal airport funds through state governments.



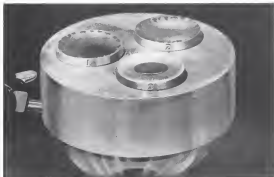
NAVY AIR FIREPOWER

Newest and most powerful aircraft rocket engine in the world is the powerplant capable of 1,600 pounds of thrust, developed by Rocket Motor Inc. in connection with the Navy Department. Powerplant is a liquid propellant rocket engine of four cylinders each capable of 1,500 pounds of thrust. Total weight is 210 pounds.



U. S.-BUILT ICELAND AIR BASE:

The extensive nature of U.S. wartime airfield installations abroad is shown in this Army picture of the base at Reykjavik, Iceland, one of the first photographs of these outposts.



What happens when aviation oil is fried?

It all depends upon the oil — and notice how the oils in the dishes numbered 1 and 2 can't stand the heating they're getting on this hot plate. They've run away from the hot spot — cooked up into gum and varnish. In a motor, that means sticky valves, pistons choked with carbon.

Now look at the RPM Compounded Aviation Oil in the third plate. Heat and air don't take its "RPM" leaves gum and varnish to mess up a motor. And it works even better in engines because it contains a detergent (oil cleaning agent) which removes old deposits, keeps engines cleaner. Other compounds in RPM Aviation Oil prevent corrosion, sludge and foaming, too, and make "RPM" cling to hot spots most oils leave bare.

"RPM" is an oil without a weakness. That's why it will increase the time between overhauls, and give you happier air hours when you pick it for your own plane.



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PRIVATE FLYING

Simplified Radio Requirements Moving Toward Final Phase

CAA system of designating private pilot examiners likely to be followed by FCC in breaking radio bottleneck.

By ALEXANDER MURRAY

Preliminary work toward simplifying the Federal Communication Commission's requirements for two-way aircraft radio communications for the private flyer is moving rapidly it was learned last week following a meeting of the CAA Non-scheduled Flying Advisory Committee with aviation engineering representatives at the commission in Washington.

While recommendations of the FCC staff are subject to action at the Commission before they go into effect, it is likely that completed proposals for several simplifications of existing regulations will be presented to the Commission in the next few weeks. The first of these, may be presented next week.

Principal Topic—The needed simplifications occupied the principal place in discussions of the Non-scheduled Flying group during its two-day session. Pattern for the new FCC recommendations is likely to be set by the simplifications which have already been made by CAA in private flying by designating private pilot flight examiners, factory inspectors and maintenance inspectors, from the aviation industry to assist the limited CAA inspector force.

CAA's excellent experience, thus far, with its divisions from industry, has created officials to recommend a similar procedure of designating persons in private radio work to assist in the growing demand for private pilot radio licensing. One suggestion is that many of the private pilot flight examiners are qualified also to examine the pilot on his qualification for a radio operator license. If the same examiner could handle both examinations, the simplification, from the applicant's standpoint, is obvious.

Further Shortcut—A similar shortcut is suggested in connection with CAA's annual inspection of aircraft. If the CAA designated maintenance inspector at a local air-

base was also qualified to check the aircraft's radio for FCC during his overall examination, another simplification from the pilot's viewpoint would result.

Current FCC requirements call for a frequency measurement of each radio transmitter every six months. Another change contemplated would be to require a frequency measurement at installation and eliminate later checks, unless the operator had reason to believe that his transmission was wandering from the proper channels. This change may be the first to be considered by FCC.

Still another move now being studied is a simplified application form for the operation of a transmitter.

Radio Staff—Currently FCC operates 33 field offices with approximately 50 examiners. With aircraft radios being installed in great, and

the need for two-way radio communications for the private flyer growing so rapidly as the number of private flyer increases, it is not likely that this small group of examiners can handle the increased workload it is required, as designee-examiners are named, or, preferably both.

FCC officials are well aware of the impending bottleneck which is likely to get more and more serious in the next year as production of low-priced radios for the private plane increases. They have been studying means of meeting the problem for some months, and the plans have matured as the tentative results of this study, together with some suggestions from the CAA Non-scheduled Flying Advisory Committee.

NATA Appoints Frost

Jack Frost, former assistant manager of the National Aeronautics Association, will head up the new Washington office of the National Aviation Trades Association which will be located at 1245 Connecticut Avenue, Northwest. The office, opened because of the increasing membership in NATA, will serve as liaison with government agencies for fixed base operators, and handle other Washington business.

The NATA Dispatch, a bi-monthly newsletter, will be continued under Frost's management and services to operators will be expanded.



PLANE-AUTO FUEL SERVICE

Emergency fueling of Locomobile Service recently at a highway filling station near Charlotte, N. C., offered a picture of what may be a common place in the near future. W. O. Hollingsworth operator of the Esso station on U. S. Highway 28, fueled the Locomobile and a new Buick sedan from the same pair of pumps. Automatic landing strips adjoining highway filling stations are expected to offer additional service facilities for the private flyer in many parts of the country as the number of private planes increases.

Piper Super-Cruiser at \$2,905 Seen as Long-Desired Plane

Greater performance, better styling and accommodations feature new, three-place version of popular model; company reports \$5,000 order.

A budding of more than 5,000 orders for the Piper three-place Super-Cruiser Model PA-12, together with a low price of \$2,905 (Pittsburgh Courier, Pa.), indicate that William T. Piper has produced an airplane of the type that many flyers have felt is needed, and at a price they are willing to pay. The new PA-12 resembles the previous Piper Cub Cruiser in basic lines of wing and tail, but is a revised and restyled model with considerable gain in performance, and great attention to styling, passenger comfort and convenience.

Navy Acceptor—Powered with a 180 hp. Lycoming four-cylinder engine, the PA-12 twice its capacity to the 180 hp. HRA-1000 engine, which is being used by the Navy during the war. But the new civil version has 18 hp. faster than the Navy plane, having a top speed of 115 mph. and a cruising speed of 103 mph.

The private flyer wanting an airplane with a little more than the basic maximum usually offered him in the past, should like the careful attention to soundproofing in the Super-Cruiser. The engine has an overhead muffler, the cabin is soundproofed and light-diffusing windows help keep the clutter out of the cabin. A standard DeLco-Burny

automobile starter and generator are used in conjunction with a 12 volt battery. The two seats are moved to the forward section of the cabin, for greater maintenance accessibility.

New Soundproofing—The Super-Cruiser has been streamlined at various points. A full-recessed leveling window the entire landing gear is equipped with rubber oval shock absorbers located within the fuselage under the front seat, and connected to the landing



Flight Cleanup—A 600-mile range and 120-135 mph cruising speed are advertised for the new Piper PA-12 Super Cruiser. 108 hp three-place personal plane shows in an unusual flight cleanup photo above

gear even with flat streamlined air rods. The steel wing struts are thicker and wider, and are fixed into the wings with aluminum steel cuffs. The two wing teels, with a total of 31 ribs, capacity, have been cleaned up for smoother air flow by use of aluminum cover plates.

The cabin interior is light-colored in blue and gray. The seating arrangement, with the pilot in front and a 36-inch rear seat for two passengers, remains the same as in the previous plane. Plexiglas is used in the sliding windows and the one-piece windshield.

Control and instrument panel arrangement includes starter button on the panel and parking brake lever under right side of panel. Dual controls and hydraulic boosters are provided, with rear seat controls quickly removable. Instrument panel contains standard instruments including altimeter, compass, speed indicator, aneroid, tachometer, oil pressure and temperature gauges. A radiator cap with side cutoff is provided. Navigation lights and instrument panel lights controlled by rheostat are standard.

Super Baggage Space—Space for 41 pounds of baggage is provided in a compartment behind the rear seat, and a small door on the right side of the plane provides quick access to the battery. Tension rings are provided in the wing, removable through quickly removable covers.

Standard color scheme for the Super-Cruiser is a two-tone cream and red combination with semi-circular stripes.

With the standard version of the Super-Cruiser in quantity production, plans are in progress for tests on a Redline version.

States, CAA Agree On New Model Bill

CAA also plays principle of state participation in enforcement of safety regulations.

A new model state aeronautics bill, following essentially the joint statement of policy issued in February by CAA and the National Association of State Aviation Officials (Aviation News, Feb. 11, 1946) has been agreed to by the Federal and state aeronautics, and will be submitted to aviation industry representatives within the next few weeks.

It is expected a finally-approved model bill may go to the president July 1, and be ready for promulgation with CAA-NASAO sponsorship to state legislatures meeting this fall.

CAA, meanwhile, announced that it approved in principle the policy of state participation in enforcement of Federal air safety laws and regulations by means of appropriate Congressional legislation.

State Role—The Board also approved in principle the policy of state enforcement, through state laws, of penalties for reckless flying within the state, if the state recognizes the Civil Air Regulations as the prescribed standards for safe operation.

The Board further approved proposals for state authorities to assist in investigation and reporting of accidents to prevent hazards within the state. Details of the state participation and clarifying authority to be exercised by state and Federal agencies is to be worked out in proceedings by committees representing CAA, CAA, NASAO and the Department of Justice.

Bill's Features—Under the new proposed bill the states would become airports, airfields and general aviation, and would register aircraft and airmen, if they chose, in addition to the Federal registration. Only permits for state registration is to be a valid Federal certificate.

State courts would be authorized to ground pilots, for reckless operation, at the discretion of the court, but not to revoke the Federal pilot's license.

The model bill would provide that every state and municipal officer "shall advise and assist in enforcing" the aviation regulations.

Enforcement—The bill would encourage aircraft flying in interstate commerce, from state registration, and would recognize the CAA flight instructor's rating



DETACHABLE WINGS:

New photo of Southern Aircraft's roadable plane. For use as a "family car," the wings and tail are detached.

without state licensing for flight instruction.

It is understood that, generally, state and Federal agencies are interested in a more widespread interchange of information. CAA indicated that many accident cases might be cleared without Federal investigation if the state investigation procedure was uniform so as to provide uniform statistical data. A plan for training state police in Federal procedures of investigating and reporting aircraft accidents may be developed by the joint committee on procedures.

100 Private Aircraft In 'Breakfast Flight'

First power pleasure hop in California takes place at Palm Springs

Palm Springs, California desert resort, became an aviation shrewd Sunday April 28 when more than 100 owners of personal aircraft joined in the first power "Breakfast Flight" sponsored by Southern California Flyers for the Los Angeles Aeronautics Club of Commerce.

For the benefit of both flyers and resort residents Southern resort-model aircraft were provided with specifications and price tags by the Breakfast Flight committee, and the power of landing planes gave visitors a fine idea of the variety of war surplus aircraft now on the market in the guise of personal aircraft.

Results of the flight are of direct interest to aviation manufacturers as well as airplane owners.

The fact that 150 personal plane owners throughout Southern California and Arizona had filed posi-

tive acceptance to take part in the flight was recorded in the statistics.

Breakfast, Indulgence—That less than half that number appeared was significant beyond the fact that a heavy coastal fog grounded the no-shows at their home airports. . . . It indicated the high percentage of pilots whose use of their planes is curtailed severely by either a lack of radio and instrument flight equipment or lack of an instrument flight rating, or both. Ready to be recommended were the huge of several "contact flight" plane owners who appeared through passes under the overcast and attempted ground clearances as little as 50 feet at times, close.

The number of planes which were able to appear at Palm Springs was encouraging, however, and indicated the probable success which might come an organized effort on the part of civil groups and aviation interests in staging frequent weekend and picnic excursions to points of scenic interest.

Ready snowdrift was the fact that there was an evidence of dangerously flying, despite the assignment of the Palm Springs traffic pattern during peaks of arrival and departure.

New Building for Wiggins

First unit in a new building program of Western Airways at Newwood (Main.) Airport, is a \$20,000 flight operations building, for the Wiggins operation and for CAA's ground inspection offices in the eastern Massachusetts area. The CAA office was moved to Newwood from their previous location at Concord, N. H. James G. Wiggins, president, and the Boston-Middleton Airport Corp. are co-operating in the building program.



Piper Burgals, Production is now underway at Piper Aircraft Corp's Lock Haven, Pa., plant for the new three-place 180 hp. Super-Cruiser Model PA-12, which offers the private flyer a lot of airplane for the price, \$2,905. FAP Lock Haven, starter, generator, lights, dual controls, standard flight instruments are included, and it is understood the plane will shortly provide a 115-mph radio transmitter, as standard equipment, and will sell for less than \$3,000.

100 Towers to Get VHF By June 1

CAA announces plans to add to 48 percent installation of new communication equipment.

Forty-eight airport control towers now are guarding the 133.8 megacycle channel for use of private flyers with very high frequency radio equipment and the number is expected to be increased to 189 towers by June 1. T. P. Wright, Administrator of Civil Aeronautics, announced last week. In addition, three other airport towers have received clearance for 133.7 megacycle channel, the Bendix radio division of Bendix Aviation Corp. reports.

The pilot can call the tower on his VHF transmitter and receive a reply on his low frequency 300-400 kc receiver. A few ground-to-plane transmissions are now being made on VHF channels between 118 and 125 megacycles. Eventually as VHF becomes the primary means of communication, the low frequency ground-to-air will be discontinued and two-way communication between planes and towers will be entirely on VHF equipment.

► Widespread Use.—CAA lists the following towers as now standing by on 133.8 megacycles: Little Rock, Ark.; Oklahoma, and San Francisco, Calif.; Denver, Colo.; Washington, D. C.; National Airport, Indianapolis, Ind.; Miami, Fla.; Tampa, Fla.; Atlanta and Savannah, Ga.; Boise, Idaho; Chicago Municipal; Des Moines and Sioux City, Iowa; Kansas City (Fortner) and Wichita, Kan.; Louisville, Ky.; Sheboygan, Wis.; Reading, Mass.; Boston, Mass.; Jackson, Miss.; Kansas City, Mo.; St. Louis, Mo.; Omaha, Neb.; Albuquerque, N. M.; Cincinnati, Columbus and Dayton, Ohio; Tulsa, Okla.; Norfolk and Portland, Ore.; Pittsburgh, Pa.; Springfield, S. C.; Knoxville, Memphis and Nashville, Tenn.; Amarillo, Austin, Big Spring, Dallas, El Paso, Ft. Worth and Houston, Tex.; Norfolk, Petersburg and Richmond, Va.; Seattle, Wash., and Cheyenne, Wyo.

In addition, Bendix reports, control towers at Las Vegas, Nev., and Bruce Canyon and Muskogee, Okla., are standing by on the 131.7 frequency.

Pacific Aircraft Sales Co. Reopens So. Calif. Office

Reactivation of Pacific Aircraft Sales Company's Southern California headquarters in the Pacific Airfield Corp. hangar at Lockheed Air Terminal has been completed by Norman Linton, veteran West Coast distributor.

As California, Nevada, Oregon and Washington distributor for Beech aircraft the company already has delivered through its southern headquarters close to \$750,000 worth of Beech 18-5 composite transports.

The opening of a dealership at Beech Field, Seattle, will give Pacific Aircraft four key sales centers on the West Coast, including a Greater California headquarters at Oakland Airport operated by Tom Alveston, a local's partner, and a Fresno, Calif., dealership operated by Tom-Linton Aircraft Co.

The company first was established at Lockheed Air Terminal in 1933 and at the peak of pre-war activity sold one third of the national production of Fairchild aircraft. Operations at Lockheed Air Terminal were suspended in 1942 because of wartime conditions.

Training Base Moves

Importance of the San Francisco Bay area as an aviation center, has prompted the relocation of the area's aviation "Technical Institute's" training base at Oakland Municipal Airport, it was announced last week.

The school, formerly at Glendale, Calif., will offer six flight training classes, and a scheduling technician course for veterans as well as civilians. Opening date will be announced later.

Airfield Shortage Troubles Northwest

Growth of private aviation in the Pacific Northwest is threatened by a shortage of hangar space and airfields.

Farrest K. Wood, Seattle, president of the Aircraft Owners and Pilots Association, recently filed a round at commercial aviation in an attempt to gain access to two north-west airports at Bay Lake and Bendon, Wash., and said, "we don't care who operates the airports, just as long as private flyers have the privilege of using the facilities."

Seeing Aircraft officials announced the Bendon field was still a "closed" operation although Northwest Airlines has conferred arrangements that it is considering lease or purchase of the adjoining 15-38 plant for use as a permanent headquarters and maintenance base.

► Charges Doubling.—Private pilots who use the Bendon field for anything except actual emergency landings are endangering themselves and others, according to Farrest K. Kingsbury, Boeing superintendent of plant protection. When Kingsbury and one pilot landed five times in one day at the field, Wood threatened with the statement he was taking all private pilots to hospital of the Bendon field until authorized to use it.

Wood also said private pilots were charged \$1 every time they "shut down" the field, and that being taxpayers should be entitled to use a portion of the field as much as the major airlines. A spokesman for the Seattle Port Commission said they feel very strongly about the commercial use and once the field is operating the volume probably will preclude use by private pilots.

Jumping Classes Opened

Arthur H. Barnes, Chicago parachute instructor, has opened two classes for parachute jumpers. One class, all student flyers, is made up of members of the Stick and Rafter Club at the Lewis School of Aeronautics, Lockport, Ill. The second class is composed of parachute veterans who wish to continue jumping as a sport.

Barnes insists there is no serious casualty factor involved for property involved and suggested parachute jumpers, and points to Army statistics which show a parachute jumping casualty rate less than that in college football.

1 CONT.



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\$90,000,000 Backlog Reported by Boeing

Headquarting its production from war to peace markets, Boeing Airplane Co. had a backlog at the end of 1945 of \$90,000,000—with more orders in sight—in comparison to 1945 sales of \$421,147,917, president William M. Allen reports to stockholders.

However, the backlog is still better than two-thirds military Boeing's orders are for 30 B-29's (the improved B-29), 10 C-57's (military transport version of the B-29), totaling \$60,000,000, and for 42 Stratuswings (commercial version of the C-37) which will yield \$25,000,000.

These three airplanes constitute Boeing's production at the present. However, the Model 417, 36-passenger biplane, also enters the picture. A machine of this aircraft is now in the Boeing Wichita, Kan., plant, where production will be undertaken when decided by the board of directors. The Boeing fighter, XP7B-1, developed for the Navy too late for service in the war, is undergoing tests by the AAF at Wright Field and its sales possibilities cannot be estimated.

Present Production at Seattle—

All of Boeing's current production is concentrated at Seattle, where employment had topped 33,000 by V-J-Day and was cut back to 13,663 by the end of the year. This figure is expected to be doubled in 1946.

The company's 1945 sales fell below the previous year's \$623,461,350, reflecting the end of the war. Net earnings were higher in 1945 because as profits were transferred to earned surplus. Profit in 1945 was \$3,453,733, or \$5.58 a share, while in 1944 profit was \$3,207,832, or \$4.02 a share. In 1944, \$4,650,000 was provided out of profits for reserve.

Allen, revealed in his report that Boeing is relinquishing all the Government-owned facilities it used in wartime with the exception of 388,900 square feet in the main plant at Seattle. Acquisition of this area and machinery and equipment is expected to cost approximately \$3,000,000.

Civilian Production Seen Soon at Culver

Culver Aircraft Corp., which last January produced one-third of all military aircraft in the country, placed its final T28C-1 (heavy version of the army PQ-14) in the shop at its Wichita plant last week. Completion of the Navy contract marks the end of production of the fastest radio-controlled target planes.

Culver started work on radio control in August of 40 when the

plant was located at Columbus, Ohio. It became the sole producer of PQ planes during the war and designed several models, each with increased speed and utility, for radio control. Total production ran up to several thousand. The planes were used as targets to train aerial and anti-aircraft gunners.

Completion of its military contracts from the company's production facilities for meeting what W. Downing Woodberry wanted as "an ever-increasing backlog of orders" for the new Culver Model V, which features Single-Ply Canard. The victory model now is undergoing CAA tests for approved type certificate.

Bell Orders 500 Engines For Helicopter Installation

Further indication of early volume production of helicopters by Bell Aircraft Corp. is seen in the announcement by Alcock Motors, Inc., that Bell has ordered 500 Franklin helicopter engines, delivery to be completed early in 1947.

The engines, of a new design developed especially for Bell helicopters, will be installed in principally in rotorcraft for commercial and industrial uses. A few, the engine company says, will be used in craft for the AAF.

The engines for Bell are based on the Franklin which during the war powered helicopters for the Army, Navy and Coast Guard. They are six-cylinder, air-cooled, opposed-type engines developing 172 hp at 2,000 rpm. They are mounted vertically within the fuselage, and cooled by an engine-driven fan. The engines are for the Bell Model 47 (Aviation News, March 25).

Three Buffalo Engineers Form Own Plane Firm

Three former Buffalo aircraft engineers have formed a new company, the Pacercraft Corp., of Danville, N. Y. to produce three-place private airplanes of their own design. They are George White and Lester Fero formerly in the Curtiss-Wright, engineering department, and LeVerne Hanks, formerly employed by Bell Aircraft in its engineering experimental and production departments. Total authorized capital stock is \$100,000.

The company now is working on a make-up of a plane of conventional design to be powered by a 100-hp engine and to sell below \$3,000.



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Last Target Plane: Wash Edwards, service manager, is shown working on the final Culver T28C-2 (PQ-14) biplane at the Wichita plant.

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WORLD'S LARGEST PROLIFER OF SIDE BY SIDE AIRPLANE



\$600,000 Plant Expansion Set by Solar Aircraft

An expensive program extending construction and alteration of buildings to cost in excess of \$600,000 has been announced by Solar Aircraft Co., San Diego, Calif. The facilities expansion, planned for some time, has been contingent upon a recently granted extension for 30 years of the company's lease with the city for its waterfront site.

Jack T. Galtman, vice president and secretary, states that the program will result in a substantial increase in employment over the company's present monthly payroll of \$250,000.

Two new buildings will be erected, one to cost more than \$350,000, the other costing for an expenditure of about \$250,000. Another phase of the expansion is the acquisition and remodeling of two houses at Lendberg Field used during the war by the Royal Canadian Air Force.

Thompson Products Tells Work on Jet Propulsion

Revelation that Thompson Products, Inc., Cleveland, Ohio, manufacturer of aircraft engine parts

and valves, has been a key producer in the development of turbine wheels for jet propulsion engines has been made by the company in a new booklet, "Jet Propulsion."

Thompson's work has been chiefly in the production of methods to work the extremely hard alloy steel necessary for the blades or "buckets" of the turbine wheels. Both the rigorous uses of the alloy and its most resistant improved techniques.

The metal costs several dollars a pound, the company explains, as compared with about four cents a pound for ordinary steel and 50 cents a pound for alloy materials considered expensive. The aviation metal forging is considered satisfactory, it is stated, if it is accurate to one-hundredths of an inch. Thompson's turbine blades are accurate to within a few thousandths of an inch.

New Generator Revealed

A compact, 33-horse generator to operate electric tachometer indicators has been announced by the Kollsman Instrument Division of the Squaw D Co. Named the "Corselec Generator," it operates a three-phase tachometer of standard, sensitive or dual type.

Canadian WAC Sells 52 Surplus Aircraft

Canada's War Assets Corp. during March sold 52 surplus aircraft, three aircraft for salvage, 25 engines and some engines, for a total of \$168,910. Aircraft sales to end of March were \$8,502,118.

Sales included five Nordyn Norwester at an average price of \$14,000 each, and three Canam Crows at \$1,500 each. Norwesters went to Vulcan Southern Air Transport, Montreal; Moose Air Service, Montreal; Johnstone Flying Service, Westbury, N. C. & Aviation, Prince Albert, Sask.; and Wolfe Fisheries, Big River, Sask. **Other Sales**—Two Canam Crows amphibians were sold to Noranda Mines, Toronto; 20 Avian IV aircraft went to Aerofit Industries of Canada, Montreal, for resale outside Canada; one Lockheed 104 to R. MacIsaac, Beauséjour, N. Y. Surplus machinery went to two airplane manufacturers. Nordyn Arcton, Montreal, purchased machinery in their plant for \$44,076, which originally cost \$207,494. De Havilland Aircraft of Canada, Toronto, bought used machinery in their plant for \$25,362, which originally cost \$14,373.

Airlines are Standardizing with Simmonds

on Electronic Fuel Gauging

With an established record of successful operation on both sides of the Atlantic, the Simmonds Pacifier Gauge is being installed as standard equipment on the giant Douglas DC-6, new luxury airliner, and on the converted C-54's joining the fleets of American Airlines System, and Northwest Airlines. It is being specified also for advanced types of Army and Navy aircraft now being built by Martin, Fairchild, Grumman,

and Consolidated-Vickers. In addition to the installations cited, four airlines are now in the process of fulfilling their precise requirements for future equipment.

Greater accuracy and reliability under all conditions have made it the first electronic fuel contents gauge to be adopted by U. S. airlines, and the first to mark the White Dot of acceptance by the U. S. Army Air Forces.

These are the reasons why engineers prefer the Simmonds Pacifier Gauge:

It measures a mass of fuel over all ranges of temperatures and basic specific gravities to within .2% accuracy.

It has no moving parts except in the indicators. Once installed, it requires but a minimum of service and maintenance attention.

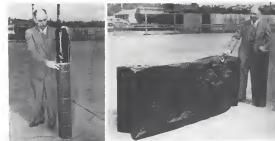
Its reliability is unaffected by changes in flight attitudes, or in temperatures.

It measures from absolute top to bottom of tanks, over the complete range from "Full" to "Empty."

It is easily adapted to any type of aircraft, whether new or in use or in design.

Find out more about this advanced fuel measuring system. Learn why engineers everywhere are beginning to "Standard-

ize with Simmonds." Write for a complete description and engineering information. There is no obligation, of course



STRATOCRUISER FUEL TANKS:

Although this specially-treated nylon fuel tank for a Boeing Stratocruiser holds 265 gals when inflated to the usage of one of the new air guns, it can be rolled into a 12-in. rolling tube. The flexible, extremely tough nylon fabric, with protective coating, provides even greater safety than the conventional fuel tanks,

but weighs some 1,600 lbs. as the total weight of the 60% Don Stratocruiser. Glove-type fasteners, and a two-ply glass fabric liner, hold the tank in place under the wing. The Stratocruiser can be completely filled with 7,639 gals of gasoline in but ten minutes, leaving reports

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PERSONNEL

TACA Airways Names Three New Officials

TACA Airways has announced several new appointments. **Douglas L. Wood**, left, has been named assistant assistant to **Julius R. Richards**, vice president and general manager of the airline. **Richard E. Mitchell** has been appointed central reserve



general manager with headquarters at Tegucigalpa. **Leont C. L. A. Mendez**, right, formerly of the ATC, has been appointed director of operations for the airline. Before the war he operated training and charter aircraft in the Pacific Northwest area.

United Air Lines has made several new appointments. **Kenneth J. Mc**



Brady, photo, has been named assistant to the Chicago office. He succeeds **Conrad Blumhauer**, recently elected vice-president of the company. **Lila A. Harris** has been named sales manager of Chicago for United. **J. Y. Meyer** has been transferred from station manager at Monterey to assistant manager at Los Angeles. **John J. Farnham** has been named manager of passenger service for United at New York, succeeding **Ben Farnham**. **Joseph Farnham** is manager of passenger service at Chicago. **W. E. Jones** who has been at Cheyenne. **James A. Welles** returns to former traffic and sales manager of United at Newark. **John W. Swanson**, who has been acting district manager, will remain as assistant in Boston.

John E. Fidge will take over the duties of advertising manager for Haskette Manufacturing Corp.

Fred W. Bagshaw, former advertising manager and public relations director of the Monroe-McLeod Group, Inc., has been appointed assistant public relations director of the Bell Aircraft Corp.

Russell G. Pettibone, executive assistant to the Midwest region general manager for TWA, is leaving for Dublin where he has been assigned on a temporary basis to Air Lines. **Frank Air** (left) is chief of the Irish company's traffic and general manager. Pettibone has been with TWA since 1936.



Daniel Schneider, formerly with Roger Aircraft Engineers, has joined the Hixson Co. in charge of production control.

Henry B. DePue, has been named service manager of South Aircraft Corp. He has been in aviation since 1931 when he joined Wichita Airways. He then became crew mechanic for the Flying Aces, a flying circus. DePue will have charge of all service and repair on products manufactured by South and will continue to be responsible for the flight crew.



Carl H. Arden has been made president of the American School of Aircraft Instruments and the American School of Wreckmaster. **Len Arden** is also a vice president of Technical Crafts.

Samuel Sewall, who resigned as president of American Overseas Airlines Inc., has been made assistant to **Leont Gen. Louis D. Clay**, deputy military governor of Germany, in charge of public health and welfare activities. Sewall resigned at the request of the Secretary of War.

B. J. Koenig has been appointed manager, aerial equipment section, supply department, Canadian General Electric Co., Ltd., Toronto. In 1931 and 1932 Koenig was the Webster Trophy for General Flying proficiency. He has been in the RCAF and was a prisoner of war.



W. Jesse Herman has resigned as Assistant Administrator of the Civil Aeronautics Administration for Aviation Training and **Edward W. Seelhor** has been appointed his successor. Herman pioneered in the CAA's pre-flight aviation training program as the nation's schools and has been in the Navy. Seelhor joined CAA in 1942, serving in air education activities and has been assistant to the chief of that department.

Appointment of the first executive committee of its recently organized Air Transport Division has been announced by the American Society of Civil Engineers. Committee members are **Alfred J. Ryan** of Denver, chairman; **Herma Stearns**, St. Louis, vice chairman; **Dwight S. Jenkins**, senior airport engineer of CAA in Washington; **G. J. McCarthy**, United Aircraft Corp., East Hartford; and **George W. Keegan**, New York. The division was recently added to twelve existing technical divisions of the Society.

Chase Wason, former district traffic manager of Mid-Continent Airlines at Kansas City, has been named to the new post of regional traffic manager of the airline, with headquarters in the same place. Before joining the Navy, Wason was in charge of the Minneapolis district air traffic management.

Ray B. Whitney, formerly of the Navy, has returned to Chicago and Southern Air Lines to administrative assignment in the traffic and mail departments. Before his discharge he was operations officer of the Naval Air Station at Lake City, Fla. Whitney was chief clerk of traffic located at Memphis before joining the Navy. He will now be responsible for preparation of budget, personnel records and administrative procedures.



William J. Sperry has moved from area of Colonial Airlines Inc. He was formerly treasurer of Chicago and Southern Air Lines. **H. H. Henshaw**, Sperry, who resigned as an executive of the Civil Aeronautics Board, was elected assistant vice president to serve as Chicago's representative at Washington. Officers elected at the annual meeting were: **Alfred Jones**, president; **Edward S. Kiley**, vice president; **Samuel T. Byrnes**, vice president in charge of traffic; **John F. Ading**, assistant treasurer; **G. Hamilton**, secretary; and **Carl H. Hoffman**, general manager.

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CHARTER NON-SCHEDULED INTRASTATE

N. C. Intrastate Line Gaining Popularity

Operation of DC-3 on non-reservation basis produces added revenues.

By S. T. HENRY

"No reservations required. Be at the airport 30 minutes before scheduled departure."

This announcement at the top of the new timetable issued May 1 by South East Airlines, Inc., Charlotte, North Carolina intrastate scheduled airline, has won widespread comment from the line's patrons, and is paying off in added revenues. The announcement replicates the South East's slogan: "Douglas DC-3 airline, and the plane has enjoyed non-reservation business almost from the day it was placed in service. April 8. Cargo handled also has increased steadily.

South East began operations last August with a four-plane fleet, which continues to service. Commented that a five-plane would pay, operating nearly 600 miles out and west, the length of New Carolina. W. C. Tague, president, and his brother Earl, vice-president, set up the new organization. Both had served as test pilots for Continental-Tulsa.

Flotily of business.—From the start the two brothers plotted their own plane. Based on the limited service they were providing, they soon saw there was plenty of demand and intrastate business to justify at least one large plane. It was some months, however, before they could contract with the necessary capital to back them. Now, hardly a month after the DC-3 started service, their opinion about it tends to justify a second such ship.

South East operates its DC-3 on a flat-fare basis that extends from Charlotte in the heart of the industrial section of the state, to Wilmington on the Atlantic Ocean. Stops are made at Winston-Salem, Greensboro, Raleigh-Durham and Wilmington. All of these fields have paid runway and regularly by charter and National.

Two schedules daily.—Two scheduled round-trips are made daily on

this route. Two hours and ten minutes is required for a one-way trip. This permits businessmen in the cities and adjacent territory to return home at convenient hours of the same day.

South East also operates its Central as two scheduled round-trip daily from Asheville in the mountains at western North Carolina to the coast. Two routes are followed in both directions. These routes and that of the DC-3 serve 10 cities, 34 of which have no other plane service.

Connecting Service.—Schedules connect with four interstate lines: Piedmont, Delta, Piedmont-Central, Eastern, and National. Tom K. Gutter, vice president—maintenance, was formerly with Pan American maintenance staff.

At present, only daylight flights are made. All planes are, however, equipped with two-way radio, and night and blind flying instruments.

Publications.—Local newspapers and local Chambers of



DIRECT CARGO LINE

These of the top executives of Rick Airways, now non-scheduled air transport service, are shown in this snapshot at the company's headquarters at San Antonio, Tex. Left in right are E. A. Warren, vice president—operations; Earl F. Stuck, president, and Jerome C. Dunlap III, executive vice president. The company, on which \$110,000 is cash, has already covered the cost of their first DC-3. C-47 Commando transport certified by CAA for cargo

Comments in the big limited publicity and support to the service rendered by South East. Where interest was lukewarm it was feasible to look at convention that the venture would be successful. Since the advent of the DC-3 service local enthusiasm has picked up rapidly. The best promotion for this service, however, has been the schedules arranged to suit local needs.

Group Sets Flights To Sport Shows

New York company includes tickets to even with air travel reservation.

Round trips by air to landing sports events are being promoted by a newly formed agency—Century Air Enterprises, New York. Century has access to blocks of seats to most important sports events and includes air with round trip ticket sold.

Headed the agency is Lou Rich, well known in sports circles.

Future Events.—The agency does not expect to own its own transport but will charter to fly ranging from New York and Chicago to Louisville, Ky. for the Kentucky Derby. Chicago from New York, including ticket and a meal served en route, may cost \$75. From Chicago, \$15, both plus 15 percent tax, after end of the ticket was deducted.

Ticket Cuts.—For the Derby, Century gave its patrons a choice of a general admission ticket at \$25, or a clubhouse ticket worth \$4.95, either at the same overall price of \$19. Fred Spencer, handling Century's publicity says that a large percentage selected the lower priced general admission, although it actually cost the cost of their trip, percentage, increasing the amount remaining to be taxed at 15 percent. Spencer called attention to a railroad excursion to the Derby, organized in Chicago by a tourist bureau which charged \$55 for the round trip, including an upper berth each way. The Century transports

were scheduled to take off at 8 a.m. the morning of the race from Chicago and slightly earlier from New York. Patrons will be returned home by about 7 p.m. the same day.

Bucket Seat Service Reported Success

Bernard Davis and Harold Gelman of Boston, who started non-scheduled passenger and freight service recently as Davis Airways, with a dressed-up C-47 and up-holstered bucket seats, are ready to answer the charges now.

They consider that the operation, most of it between Boston and Miami at times above the scheduled currents, may now be termed a success and have added two more C-47s, which are being converted at Walnut Ridge, Ark., as standard airlines (reclining, adjustable seats) and are negotiating for two more which will give the company a fleet of five Douglas Davis and Gelman are also shipping for at least one C-54.

They report their bucket seat ship attracted more passengers. This could be carried on the two weekly trips between Boston and Miami. They were collecting \$100.00 for the scheduled trip, and \$80.00 for the bucket seat. Most recently, they lowered the fare to the \$74.75 charged by Eastern Air Lines. Recently they will drop the Miami operation and offer a "Packaged," all-expense vacation tour to Miami City, with departures from Boston every 15 days. Davis and Gelman admit they can keep the passengers happy in bucket seats. They have had steady service, next to the meek, and are fresh in demand for a passenger's occasional use.

Meanwhile, other developments in non-scheduled operations were

Scheduled Airways.—Applications for a charter for a new airline to provide hourly service from Knoxville to Nashville, Tenn., has been received at Knoxville by Stuart Adcock, majority stockholder in the proposed company. Scheduled Airways, Inc. Adcock and plans are to operate flights from Bristol to Memphis and to Memphis hourly service between Knoxville and Nashville, with stops at Bristol.

Southern Air Lines.—A Boarder with more than twice the capacity of the earlier plane, has been placed in possession by Southern Air Lines on the flight between New Orleans and Miami. The service provides for a daily flight each way leaving Monroe at 8 a.m. and

Canadian Services Mushrooming

An increased number of licenses for non-scheduled air service is reported by Canadian Air Transport Board, Ottawa, including government operations. Among the airlines granted a license to the Department of Public Health, Province of Saskatchewan, for carrying passengers to and from base at Regina and Prince Albert. This is an emergency ambulance service for outlying areas to give hospitalization to people from far from medical aid. A Newburg, Minnesota, equipped as an ambulance plane in being used.

This airline commenced at Fort Wilkison, Ark., which to date has had no commercial air service, have been licensed to operate scheduled service, with CATH receiving demand on scheduled service for later. They are Superior Airways Ltd., using Cessna,

and Thunder Bay Air Lines. **Slide Rule Incentive.**—Meanwhile CATH has ruled that passenger and freight loads for non-scheduled airlines. Government must depend on type of license issued.

All air carriers performing charter service from a fixed base of base must charge rates for carrying passengers or goods of an hourly or mile rate for the entire flight, except that the aircraft operators who wish to charge as a "per passenger" or "per pound" must not be a license to operate a non-scheduled service from a fixed base between specific points. A non-scheduled airline cannot be licensed to anywhere within a region does not utilize the permission to charge from a "per passenger" or "per pound" base.

arriving New Orleans at 10 a.m. and on the return flight leaving New Orleans at 4 p.m. and arriving in Monroe at 8 p.m.

Florida Air Freight Corp.—New York City (Atlantic States, April 1) has been given its first C-47s at Baltimore, Md., for conversion as cargo carriers. As soon as two or three are ready, overnight charter service will be started between Baltimore, company's eastern base, and the Midwest.

America Air Express Corp.—New York, completed its first east-coast round-trip flight at Newark recently with an up-holstered cargo of fresh Imperial Valley vegetables. Four C-47s are being used, with more expected to be in service by June 1.

Wacoan Central Airlines.—Clintworth, Tex., is operating intrastate passenger flights between Madson and Superior, via Milwaukee. Other steps will be made at Clintworth.

Windsor and Kitchener.—According to J. J. Madon, general manager.

Glenn Circle Airways, Inc.—New Orleans, has been organized by a friend of former Army and Navy pilots as a charter freight line operating "to any point from the Gulf to Canada."

A. A. Mississippi Aeronautics Co.—Mobile, with full authority to regulate intrastate airlines, to be provided by a bill passed by the state legislature almost without debate or opposition. The company will be composed of three members, one from each supreme court district, to be

suggested by the governor and confirmed by the senate, to serve one-year overlapping terms. A director of aeronautics would be appointed who would be required to have at least two years of experience in aviation. He would serve as executive officer.

Coast Growers Likely To Resume Shipments

Western producers broke this spring are expected to resume experimental air shipment, permissible to eastern markets.

Cuts in air freight rates, and the increasing number of non-scheduled equipment (C-47s and C-54s) which can be classified in such a market area, will result in an intensive study of shipping methods needed to assure maximum losses in handling air shipment.

P.M. Henderson.—A week-end early indication of the expected surge of spring and summer shipments of perishables was given in San Francisco last month when the produce firm of Henderson Fruit and Co. chartered a United Air Lines plane to ship 150 tons of asparagus to Chicago. Henderson reported that the shipment cost amounted to about per ton on the basis of United's charge of 15 cents per ton-mile for a 1,800-lb. minimum shipment.

The shipper said his firm's interest was in determining the best method of shipping fruit, but he noted that extensive fruit shipments will be made in the near future.

HOUSING CAN COST TOO MUCH

EVERYONE in the United States wants our people, and particularly our war veterans, well housed quickly. Almost everyone, we believe, likes the vigor and imagination with which Wilton W. Wyatt, the housing expert, is going about the job of mobilizing our housing resources.

No one, however, wants the veterans, or anyone else, to get a lot of severe economic headaches along with the housing. As it stands, the emergency housing program runs unnecessary risks of having such results.

Here are the reasons:

1. The principal opportunity the program offers to the veteran is that of buying a high-cost house where a chance is not would, more often than not, meet his needs much better.
2. At the worst possible time, the program adds substantially to the dangers of a runaway inflation of the sort that inevitably ends in a crash.
3. Little is done to try to reduce the extremely high costs of building, such as those resulting from restrictions imposed by labor unions and antiquated building codes.
4. By giving overriding priorities to unsustainable goals of home construction, the program endangers a volume of industrial construction necessary to maintain full employment.

Needs of Veterans

First on the needs of the veterans. What many, if not most, veterans need is a chance to put a piece at a reasonable rental while they are getting shakedown in their postwar careers which in many cases are inevitably unsettled at the time. Essentially, what the "Veterans Emergency Housing Program" gives them is a chance to buy, for about \$6,000, a house built along conventional lines and peddled with rushed bureaucratic labor and material cost.

But what are the alternatives? There are at least two. One is to put far more emphasis on more effective use of existing housing than the Wyatt program has thus far. The other is to see that the proportion of new rental units is each stepped up.

Incredible as it may seem, there are at present more than 3,000,000 vacant dwellings in the United States. Many of them should be demolished. But many permit of relatively satisfactory temporary use. Many new single dwellings can readily be converted into comfortable multiple dwellings. The emergency program assumes that only 250,000 dwelling units can be

provided this year by these expedients, but it does not seem unreasonable to assume that this figure might be doubled by a vigorous drive. The result would be a better balanced emergency housing program, because it would provide more rental housing immediately and save critical building materials.

Of the new housing units contemplated by the Wyatt program, it is estimated that only about 26 per cent will be for rent. Before the war more than half of the houses in the United States were rented. That means that unless the Wyatt program is to create little less than a revolution in the terms on which houses are occupied, it must be aimed to include a much higher proportion of rental units.

To secure the result in the face of present high building costs special expenditures will be required. They might be provided by allowing accelerated tax amortization of, say, half the construction cost over the next five years, together with rent ceilings high enough to make this form of investment attractive. This would, of course, call for higher rents, but the actual price to the veteran, in view as well as money, might well be much less in the long run than if he bought an overpriced house now.

Too Easy To Pay Too Much

One of the nightmares of the Wyatt program is its general emphasis on resources to increase the supply of money with which to buy houses when the demand for houses is already at an all-time high. Some veterans may need special financial help, but the plan to give 30-35 per cent mortgages generally on new houses is not only unnecessary but positively dangerous. By providing up to \$3.5 billion of government-guaranteed credit for houses this year, and almost twice as much in 1947, the program will release an equivalent amount of individual savings to create further demand for goods and services. All that such generous mortgage terms will accomplish with certainty is a dangerous lengthening of the odds that we will not avoid a boom and bust cycle of inflation.

If building codes were brought up to date and arbitrary union working restrictions were eliminated, the way would be paved for reductions in the price of standard houses which, it has been estimated, might run as much as 20 per cent. This would both give the buyer of a new house a far better raw fee for money, and also reduce the inflationary pressure created by the super-generous credit arrangements involved.

Getting anything done along this line is difficult, particularly because the restrictions are imposed by tens of thousands of separate localities and organizations. Some headway is being made. The local emergency housing committees being set up under the Wyatt program provide a means of doing much more. For more steam must be put behind this aspect of the program, however, if its greatest potentiality for permanently constructive accomplishment is to be realized.

Crippling Essential Industrial Production

The goals set for emergency housing construction—1,250,000 new homes starting this year and 1,500,000 started in 1947—are higher than any qualified statistician thinks can be met without crippling other essential construction. The reasons commonly assigned for such optimistic goals is that they are inspiring to those in the industry and soothing to those who want something tremendous done about housing.

Under normal circumstances, relatively little damage might be done by such excessive goals which are common features of most Washington program trying to elbow their way to the center of the national stage. However, the emergency housing program carries with it top priorities for the materials to be used. Consequently, other essential construction will have to get along on whatever share of critical building materials will be left after all demands of house builders have been satisfied.

The Civilian Production Administration estimates that output of important materials will fall far short of needs. It forecasts a 15 per cent deficit in lumber, 18 per cent in bricks, and 32 per cent in cast iron radiators. Hence, unless building materials output can be stepped up for more rapidly than now seems possible, a prohibitive squeeze will be put on industrial building to provide the materials needed for the Wyatt program. This would emphasize unbearably the problems of sustaining full employment and getting the flow of production so expert as avoiding the boom and bust route.

Perspectives on the Housing Shortage

What is needed is an aggressive drive to get full production of building materials as rapidly as possible. Such a drive should concentrate on measures aimed at helping the industry remove the obstacles to all-out production rather than on such measures as the subsidy plan which seems quite likely to succeed only in extending the industry in more government controls. After making due allowance for the materials outlook and the needs for essential non-housing construction, housing goals should then be set as high as feasible. As matters stand, by setting construction goals before feasible material goals are determined, the cart is put before the horse.

There can be no doubt about the seriousness of the housing shortage and the necessity of a program

commensurate with the magnitude of the problem. It also remains true, however, that the housing shortage for the nation as a whole is not quite as desperate as those who want the country to drop everything and go to building houses would have us believe.

During the war 3½ to 4 million new dwelling units were built or created by nonbuilding in other than farm areas. The number of families living in such areas increased by less than 3½ million. Even though some of this housing was located in remote places as an adjunct of war production works, the wartime increase permitted a margin for more housing per family at this time. Indeed, it has been estimated that the rate of doubling up is only about one-third as great as in 1940. The margin did not begin to suffice, however, to meet the needs of those millions of people particularly in the lower income groups who, thanks to rapid increases in income, can afford to have and insist upon having better housing than they have ever had before.

A rising standard of income which makes possible a new standard of housing for many people is a fine thing. Above all, it is important to see the veterans get the best possible break in housing.

But Housing Can Cost Too Much

The Wyatt program has many good features. The emphasis on prefabrication, though perhaps over-optimistic, is laudably made in. The emphasis on local collaboration in solving housing problems which are inevitably in large part local should lead to permanently valuable results. The vigorous mobilizing of 200,000 temporary dwellings to meet at high speed some of the most desperate shortages is all to the good.

The main trouble with the program is that it does not pay enough attention to the economic havoc which may be created in the process of trying to meet its excessive goals. As a nation, we should be and are willing to pay a high price to get adequate housing. But the price will be too high if we:

1. Give the veteran a bad bargain by selling him an over-priced house.
2. Cripple industrial production needed to create good jobs for veterans, and
3. Touch off a disastrous inflationary sequence in the process.

These pitfalls can be avoided. All of us, including the veterans, have a common interest in seeing that they are avoided.



President, McGraw-Hill Publishing Co., Inc.



Leisurely comfort is provided in roomy Stratocruiser berths.

Slumber in the sky

Here's restful sleep for air travelers! Above the weather is a peaceful sky full of stars, almost a smooth-sailing Boeing Stratocruiser.

Large, deep, comfortable berths with smooth linen and soft blankets — and fresh air at just the right pressure and temperature at any altitude.

Passengers will be able to reach almost any destination overnight, both way across the United States, or towards London, Rome, Stockholm or Shanghai at more than 3 miles a minute.

By early 1957, each flight will be a regular feature of travel. Stratocruisers, engineered with the same rugged dependability as the Boeing B-29, are now being built by Boeing for many airlines.

To dispose various of the Stratocruiser, berths are 7 inches wide, a inches longer than is a standard sleeping car.

There are separate large dressing rooms for both men and women. And a lower-deck lounge for relaxation until passengers are ready to retire.



The Stratocruiser must show weather.

BOEING
STRATOCRUISER

The Stratocruiser's unequalled speed, comfort and reliability will soon be available on these forward-looking airlines — Pan American World Airways.

Swedish International Airline, Northwest Airlines, American Airlines — for which Boeing is building fleets of these super transports.

TRANSPORT

NWA Signs Cargo Agreement With Railway Express Agency

Entrance of railroad company into air freight field studied by airlines for implications as to future development of cargo business.

Railway Express Agency, whose air express agreement with the airlines has been in effect since 1946, has extended its activities into the relatively new field of air cargo through an agreement with Northwest Airlines.

NWA and REA have filed with CAB a special cargo tariff, including pickup and delivery, to be effective June 1. Based on 26.7 cents per ton-mile, and without commodity classifications, the new tariff on 100-lb minimum shipments encompasses an air cargo rate structure which had just begun to settle down.

Although the merits of REA—with its long experience in pickup and delivery—are recognized, first reaction by some shippers for other services was that this will be an effort to use an industry shortstop by the toehold Railway Express would be given in the air cargo field.

Order Made — Stinson comment from one air cargo specialist: "This will make the other airlines feel it's hard to conceive of an air carrier entering REA to develop air freight business when the agency is railway-owned and has a competitive operation of its own."

Through its Air Express Division, REA already is an air carrier, though without the right to fly its own equipment. The rates of its first air freight tariff state definitely that the "carrier" referred to therein is Northern Express Agency, Inc., with the additional specification that shipments will be carried by Northwest's aircraft.

Competitive Tariff — The new REA-NWA tariff compares with a straight tariff, not including ground handling, at 26.5 cents per ton-mile quoted by United Air Lines and a similar tariff by American effective April 25. TWA, other large cargo carrier without scheduled services, has a tariff without pickup and delivery and with different commodity

classifications ranging from as low as 26 cents per ton-mile up to as high as 56 cents, with 39 percent discount for shipments of 1,000 lbs. or more.

Airline cargo executives suggest that pickup and delivery costs average around 5 cents per 100-mile, indicating that with the ground service included, Northwest, using REA's facilities, may be quoting the lowest price among scheduled carriers, except for United's special commodity rates on perishables. These are as low as 15 cents per ton-mile.

Just announcement by Northwest and Railway Express and the rates for the "raw type of high speed door-to-door air freight service" would be approximately 50 percent below present air express

rates (\$1.8 cents per ton-mile). The air freight, which is deliverable cargo, will be handled on a straight pickup and delivery basis, with a consideration, air-rail rate quoted when a shipper is off the airline route. Other airlines which handle these cargo as a straight airport to airport charge with pickup and delivery extra at 25 up to 35 and 40 cents per 100 lbs. do not compare with REA.

Cargo managers on these carriers point out, however, that many large shippers prefer to handle their own pickup and delivery, while REA's tariff leaves no choice. Also it will be high in relation to United's special commodity rate out of the northwest on fruits and vegetables. This is 15 cents per ton-mile on shipments from California, Washington, Oregon and Utah, to Kansas and the east.

Northwest has 23 DC-7s and is acquiring some DC-7s, but so far all are passenger transports. Railway Express runs the 100-lb. minimum shipments under the new tariff will be handled on regular passenger flights for the present, but if volume justifies DC-7s may be converted into all-cargo.

Contract Details — Under the five-year contract whereby REA will furnish local pickup and delivery service for Northwest, the Agency will pay the airline 18 cents per ton-mile after deduction from the gross revenues of payments for advertising.



CONVERSIONS IN ALASKA:

These C-47s are part of those being converted to airline use in Alaska Airlines' shops at Anchorage. Part of them will go into cargo operation in the near future.



TUDOR II PRODUCTION SPURRED:

Steps are being taken to speed production of the Aero Tudor II, Britain's latest transport plane, shown here during recent test flights (AVIATION NEWS, April 1). Tests were deemed successful by the Minister of Civil Aviation.

and insurance premiums and loss damages, charges for transportation by carriers other than the contracting parties, smoothable revenues and other items mutually agreed upon. The expense company itself will receive \$2 per shipment, whatever the size of shipment. Remaining revenues or deficits will be shared equally.

The payment of 36 cents a ton-mile is considered an enhancement of at least the 34 cents per ton-mile rate. If it falls below, as it may if other lines reduce their tariffs, payments to Northwest by BEA will be reduced accordingly, to maintain a spread of 18 cents per ton-mile. If this margin cannot be maintained, Northwest may cancel the contract.

CAB agrees with whom the agreement was filed and it is another way of doing what American, British and TWA are doing with the trucking companies who handle their freight pickup and delivery.

CAB Heeds:—The BEA-TWA arrangement has one hurdle to mount before it can become effective. CAB can reject or suspend the tariff on reason of its own or complaint by another carrier. If suspended—probably for 180 days—hearing would be held after which the Board might either reject the tariff or allow it to become effective at the end of the suspension period. The Board also could disapprove the agreement.

Microfilming Proposed

A proposed revision in CAB regulations to enable airlines to photograph all old records and, as approved by the director of CAA's Research Bureau, to substitute such film for the original documents has been circulated to the industry.

Pilots' Duty Hours Held Not Excessive

ATA representatives are on edge for major revision in existing flight time regulations.

Representatives of the Air Transport Association told CAB safety officials last week that existing Civil Air Regulations provide satisfactory limitations on airline pilots' flight time and cautioned against further reductions in duty hours which would encourage the growth of "feather-bedding" and impose undue operational and financial burdens on the carriers.

Endorsing a listening called to discuss the relationship between maximum hours of duty and safety in air carrier operations, ATA officials said that medical data indicate no instances of pilot health impairment during the 18 years under present regulations.

They declared that new planes, including the DC-4, Constellation, DC-4, Strato-cruiser, Jetstream, Martin 300 and 300 and Consolidated 240 embody improvements over the DC-3 which will materially benefit pilots' working conditions. Consolidation of these improvements, in ATA statement continued, leads to the conclusion that while the new aircraft may be heavier and faster there will be no increase in pilot strain.

CAB experience in operating similar equipment was cited.

Only change recommended by ATA in present pilot hour regulations was an alteration in section 62.116 by inserting the provision of Part 41 that was necessary to enable domestic carriers to provide long-range service with suitable aircraft.

Post Office Pushes Action on Airmail

Sullivan tells carriers that effort is being concentrated on lower rates and parcel post.

The Post Office Department called for immediate action on two phases of its airmail program at a meeting with airline representatives last week, and asked the carriers to aid in their expeditions.

Geoff Sullivan, Second Assistant Postmaster General, declared at a conference between the airlines and Department inspectors who are surveying airmail conditions and prospects that effort is being concentrated on a 5 cent postage rate for air mail (now 8 cents) and establishment of air parcel post rates.

Legislation for a new airmail should be moving faster than it is, Mr. Sullivan said, expressing the hope that it would be a "matter of days" until such a rate was a reality. Loss of revenue through the reduction, he feels, will be offset by increase in volume. On air parcel post, he anticipates a lack of support, although the Department will fight for it "vigorously and in the open." He expects air express operators to attempt to delay its advent.

Helicopter Service:—The official's interest in helicopter service to serve communities near large cities with mail pickup is well known, and he told the airlines that surveys of possibilities along this line have already been made in Los Angeles, New York and Chicago.

He believes in addition to these, Detroit, Philadelphia and Boston will meet helicopter service. Primarily he expects to see helicopter mail service inaugurated at Los Angeles before the end of the year, but he emphasized at the meeting that he expected inauguration of helicopter mail pickup and delivery through regular CAB certification, rather than in a Post Office Department experiment.

Airlines Interested:—A spokesman for Air Transport Association commented that the airline industry was much interested in the understanding and would like to be consulted. The scheduled carriers have the feeling, he added, that such a service would be not only complementary, but supplementary.

Airlines represented included American, American Overseas, All American Aviation, Chicago and Southern, National, Pan American, PCA, TWA and Western.

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Three Specialists Added To ATA Operations Staff

Three new specialists have been added to ATA's Operations Division staff. William B. Becker will work on Civil Air Regulations, H. L. Roberts on air traffic control, and Morris A. Warkow on airport and approach lighting.

Becker spent three years in CAA's General Counsel's office, where he specialized in CAR. Roberts goes to ATA from American Airlines. He was with CAA nearly seven years, the last three in charge of its radio control tower, and with PCA six years. Warkow, formerly head of the Airport Lighting Unit of Navy's Bureau of Aeronautics, is working on a program for installation of high intensity lighting at major airports.

Decision on Any Action In NAL Case Due Soon

Any steps the Justice Department may take in prosecuting National Airlines for "willfully" violating the Civil Aeronautics Act when it acquired control of Caribbean-Antilles Airlines (Aviation News, March 18) probably will be known within a month.



TWA'S LAST ATC FLIGHT:

Considering its western Atlantic assignment for the Air Transport Command, TWA recently set the above crew on the line's 9,500th and last ocean flight of its contract. Left to right, Capt. C. D. Miller, First Officer Carlton Reed, Flight Engineer William Wynn, Navigator Doug Bell, and Radio Officer Hank Brown. At extreme right is M. D. Brown, chief pilot of TWA's Intercontinental Division.

CAA, after sharply rebuking National for its violations, referred the case to the Criminal Division of the Justice Department under Section 962 (a) of the Act. This section provides for a first offense fine of not more than \$500, and a fine not exceeding \$1,000 for any subsequent offense. If the violation is a continuing one, each day of offense constitutes a separate violation.

Case Would Be First—Should the Justice Department decide to prosecute, and should a conviction be obtained, the case will be the first in which the penalties listed above have been imposed for violation of CAA's economic regulations.

Examiner Recommends NWA Route Merger

Northwest Airlines moved a step closer last week to achieving its plan for the fastest non-stop coast-to-coast service when CAB Examiner F. A. Law recommended consolidation of the carrier's three routes, AM 3, 45 and 68. Law made his recommendations and submitted the case directly to the Board for decision immediately after a hearing at which Northwest's application was unopposed.

Integration of AM 3 with 68

would remove the necessity for landing at Minneapolis-St. Paul and would enable Northwest to request New York-Boston and New York-Portland non-stops, both well within range of the two Boeing Stratocruisers ordered by NWA.

Besides the possibilities for transcontinental non-stops, Northwest officials declared that immediate integration at the Twin Cities, terminus of AM 68, makes flights over that point desirable on some schedules. Savings of between \$11,000 and \$12,000 annually is noted.

Navy School Moved

Navy's four-engine transport line maintenance training unit is being shifted from Douglas Aircraft Co. to Cal-Aero Technical Institute at Grand Central Airport in Glendale, Calif. Transfer is open only to Naval Air Transport Service personnel.

Benefits of Merger Cited By Monro

Northwest Airlines last week was joined by C. Donald Monro, PCA president, as a small regional carrier with limited resources, waging an increasingly difficult and ultimately losing fight with American Airlines and Eastern Air Lines for business on its only high-density traffic route, New York-Boston.

This competition, Monro told CAB examiners at the PCA-Northwest merger hearing, will become progressively more severe as American and Eastern acquire additional equipment and develop high-powered sales programs. He declared that Northwest, in an effort to maintain its position as the New York-Boston route, would do everything in its power and equipment that the full potential of the rest of its system could not be realized.

Would Aid Competition—Merger with PCA, Monro said, would not only permit effective competition with Eastern and American between Boston and New York but would, because of greater resources, open the way for complete development of Northwest's less traveled routes. Integration of the two systems, he continued, would effect significant economies in operation, create substantial new traffic through new one-carrier service between cities of the merged system and afford savings to both the traveling public in fares and the government.

Monro estimated the traffic be-

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Petition Asks Delay In Feeder Award

Mountain States Aviation, Inc., Denver, unsuccessful applicant in the Rocky Mountain case (Aviation News, April 13), has petitioned CAB for a stay in the order granting a feeder line certificate to Ray Wynn, Inc., against the Board's

decision was arbitrary and that the conduct of the case violated veterans' rights.

Harry B. Conkle, Mountain States president, declared that the Rocky Mountain proceeding took place while the officers of Mountain States were in the armed service and unable to participate in the preparation of their case or to appear to give testimony in support of their application. He said further that CAB had refused to give Mountain States officers the opportunity to be heard after their release from the service and prior to the Board's decision, thus being in violation of veterans' rights under Federal law.

Mountain States also asserted that Ray Wynn, Inc., was created by the officers solely because of prior filing of its application and that the Board's decision was therefore, arbitrary and an abuse of its discretionary powers. Should the Board deny its application for reconsideration of the decision, Mountain States intends to take the case to the Federal courts.

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Support for Gael Sullivan

EVERYONE accumulates rapidly that the unheralded, little-publicized appointment last October of Gael Sullivan as Second Assistant Postmaster General was one of the most important events in aviation in recent years. Certainly it is the most encouraging development in airmail since the lamentable 1934 contract cancellations.

Sullivan, thanks to Postmaster General Harney who appointed him and supports his program, is responsible for a spirited renaissance of an office which had been drained steadily of its vitality during the most crucial years of a vigorous, expanding commercial air transport system. Imagination and enterprise of a few of the Second Assistant's personnel had been held down and discouraged through the years by a complacent and decent handful of railroad-minded top office holders, whose timidity exceeded any possible temptation they might ever have had to improve public service. They dared not risk publicity, or to displease other Washington bureaucrats who were just as solidly entrenched behind solid bulwarks of tradition.

After some six months of skeptical interest in Mr. Sullivan's ability really to do something about his well-voiced ambitions for public service and efficiency, aviation should realize that he is making progress.

He has speeded the airmail, and promotes more of it, in more places. He chafes for reduction in airmail postage rates. He promotes a program for a perched post "ruggedly and in the open." He will push the development of helicopter shuttle services in heavily populated areas and between ships and shore, as rapidly as technical progress allows, and last week at a meeting with airline representatives and department inspectors he launched flying wedges of trusted post office investigators who will canvass the nation for ways and means of improving airmail.

Still not realized generally are the tremendous possibilities for widespread local and regional air service development inherent in Mr. Sullivan's decision to participate in the new route cases before the CAB. The foundation of the Civil Aeronautics Act is development and maintenance of an air transport system which will meet the needs of the national defense, the postal service, and the foreign and domestic commerce of the United States. In the past, new services certified to the CAB by the Army and Navy as necessary to national security have been granted almost automatically by the Board. The Board has made its decisions on the

value of routes to commerce. The Post Office, on the other hand, has seldom taken any important part in new route proceedings since the 1938 act was signed. Mr. Sullivan now promises this lethargy is ended. It now seems likely that he will make contributions to the Board in all future cases—some already heard—and that such recommendations of new routes will virtually create an obligation on the part of the Board to approve them.

Mr. Sullivan has already made enemies in official Washington who will probably continue to circulate reports of defection and doubt. But they are enemies that a progressive, hard-driving Second Assistant Postmaster General would have made a decade ago. He deserves the unanimous support of aviation, and if he can maintain the pace of the past few months, and can attain even a fraction of his long-term objectives, he should be in line for the most notable achievement awards it is possible for this industry to bestow.

High Tribute to Air Power

GENERAL EISENHOWER's statement of defense planning for the next 18 months represents probably the greatest recognition ever given to air power by an American army chief of staff.

He placed top emphasis on air power, "full, free and open-minded" scientific research and a worldwide intelligence service.

"Under current conditions and those of the predictable future, the influence of air power cannot be over-emphasized," he said.

Although calling for utmost progress in research, the chief of staff took an oblique slap at those who would virtually eliminate production of today's military aircraft on the argument that they are obsolescent.

"Any war commencing within the next few years would of necessity initially be fought primarily with weapons now on hand or in production," he made clear. "This point Congress would do well to remember as the army and navy present their regular and interim budget requests from time to time."

Looking farther into the future of air power, the general warned that the nation might be attacked by "barbarically destructive missiles . . . discharged from small, well concealed and widely dispersed installations." Similar statements have been made before by air power advocates who could be accused possibly of some prejudice. But coming from the war time Allied Commander-in-Chief, and the peacetime chief of staff, they assume an unrefuted and unprecedented importance to the nation.

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